

IRRIGATION ARRANGEMENTS IN GUILFORD COUNTY, NORTH CAROLINA

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IRRIGATION ARRANGEMENTS IN
GUILFORD COUNTY, NORTH CAROLINA

A Report of an Irrigation Survey in Guilford
County, Conducted in the Summer of 1962

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Introduction

This is one of a group of reports of irrigation surveys made in the summer of 1962 covering eleven North Carolina counties. The surveys are part of a research project concerning arrangements by water users in selected areas of North Carolina to secure water sources. Conducting the surveys was James E. Martin, Jr., currently a second-year law student at the University of North Carolina, under the supervision of Milton S. Heath, Jr.*

Briefly, the purpose of the irrigation surveys is to examine and analyze the following factors:

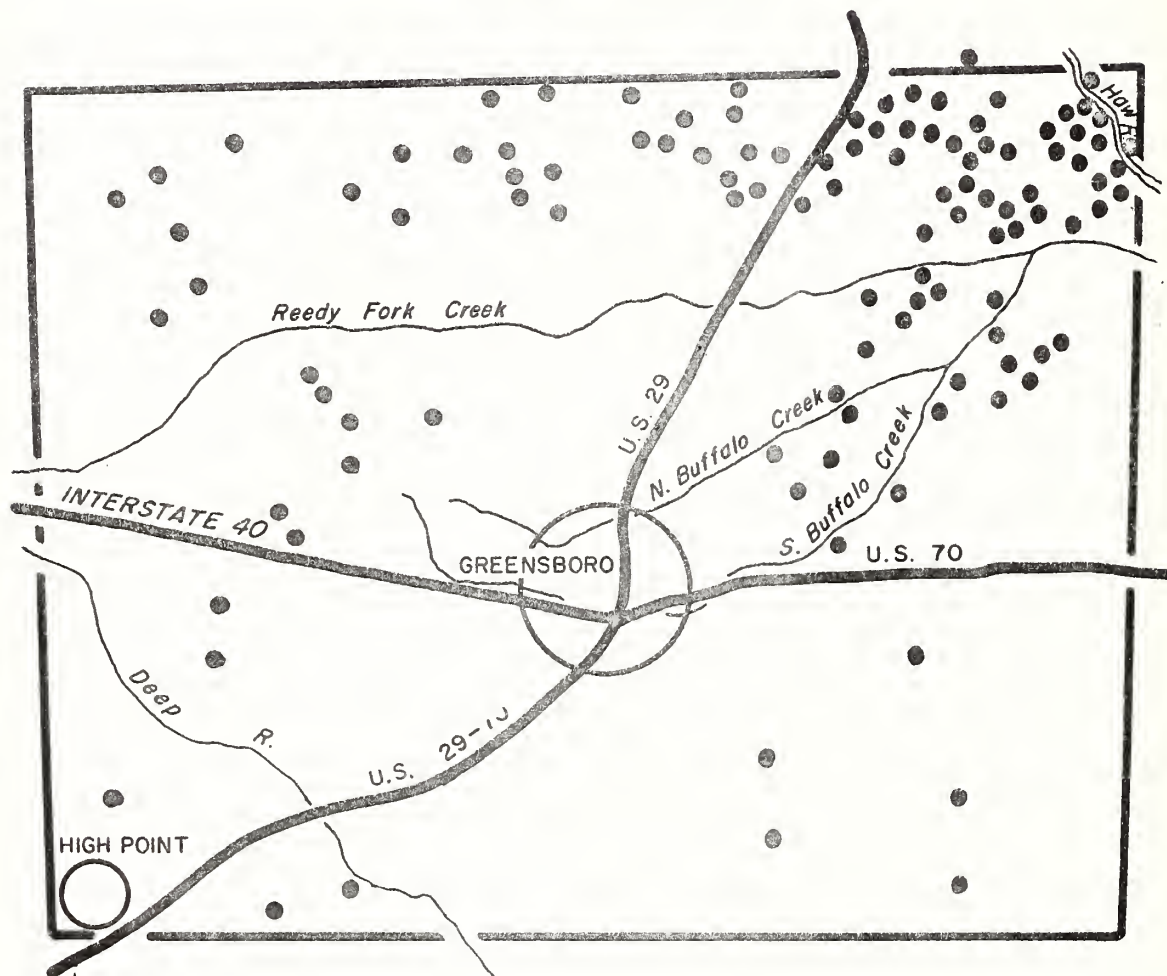
- .The nature and magnitude of farm irrigation in selected areas.
- .The types of crops irrigated.
- .The sources of water used.
- .The legal arrangements made by the irrigators to secure their sources of water, including purchase of land or water rights, agreements among irrigators and other water users concerning water use, permits required, etc.
- .Any disputes that may have arisen over sources of water affecting these irrigators, and the outcome of the disputes.

With this and other information developed through the research project, it is hoped that an accurate evaluation can be made of the operation of the existing structure of laws and political institutions affecting water use, of its weaknesses and strengths, and of its impact on water resource development.

The procedures followed in this survey are described in detail by Water Resource Paper No. 2. Briefly, the known irrigators were identified with the assistance of county agents and Soil Conservation Service personnel, and then were personally interviewed. A prepared questionnaire was used as a point of departure for the interviews.

*Water Resource Paper No. 1 contains a description of the over-all research project. Water Resource Paper No. 2 summarizes the 1962 irrigation surveys and reviews the procedures followed on the surveys.

IRRIGATION IN GUILFORD COUNTY



Key:

- REPRESENTS AN ACTIVE IRRIGATOR WHO WAS CONTACTED IN THIS SURVEY DURING THE SUMMER OF 1962.



General Review of Irrigation.
in Guilford County

This survey indicates that there are approximately one hundred and twenty irrigators in Guilford County.* More than one hundred of these are on tobacco farms while the remaining farms use their systems on truck crops, nurseries, or pastures.

The northeastern quarter of the county bordered by US Highways 29 and 70 contain the heaviest concentration of systems. This area is well suited for pond building and branch or spring fed ponds constitute the prime water source.

The lower half of the county has the least number of systems. Here more of the land is in timber and is seemingly better suited for pasture than for tobacco.

There were no unusual situations reported other than several persons sharing pond beds through informal agreements, none of which were available for examination.

Summarized Results of Survey

1. Extent of coverage

Suggested list of irrigators (SCS Unit Conservationist)--79

Farms reporting irrigation in 1959 U. S. Census of Agriculture--198

Persons contacted--113

Active irrigators contacted--109

Estimated number of irrigators in Guilford County (authors' estimate)--120 (minimum)

2. Time required for conduct of survey in Guilford County

8 days for interviewing irrigators and others

3. Water sources

Ponds--108

Continuous Flow Ponds--99

Surface Ponds--32

Combination Usage--23

*As noted in the summarized results, however, almost 200 farms were reported irrigating in the 1959 Agricultural Census.

Streams--4

Wells-1

Combination of Sources (ponds, streams)--4

Note: The information concerning water sources, including the classification of types of ponds, was derived from the irrigators themselves, not from personal inspection by the authors. An explanation of the terminology used here--e.g., "continuous flow ponds"--will be found in U.N.C. Water Resource Paper No. 2.

4. Types of crops

Tobacco (100 farms)

Largest farm--33 acres

Smallest farm--2 acres

Average farm--9.83 acres

Truck (9 farms)

Largest farm--5 acres

Smallest farm--1 acre

Average farm--2.22 acres

Pasture (includes corn) (7 farms--5, 5, 30, 4, 4, 6, 12 acres respectively)

Nursery (3 farms--4, 10, 1 acres respectively)

It should be noted that the figures above reflect the acreage irrigated and not necessarily the actual acreage of the respective farm.

5. Water usage

There are no reliable data available concerning the amount of water used for irrigation in the area and no mechanical measuring devices are in use. (See Water Resource Paper No. 2 for further comment.)

6. Expansion

No expansion planned--81

Expansion planned--28

7. Disputes over water, etc.

None reported

8. Purchase of water rights or agreements concerning irrigation

Several informal agreements were reported regarding the sharing of ponds, in the nature of gentlemen's agreements. They were written, but copies were not available or could not be located.

9. Acquisition of riparian lands, easements, etc.

None reported

10. Recent irrigation trends

Recent droughts have apparently made irrigators appreciate their systems, since 28 reported plans for expansion in the near future.

Even though 1962 has been a rather damp season practically all irrigators used their systems at least when setting out their tobacco if not at other times.

Acknowledgments

SCS Unit Conservationist Henry W. Robertson gave us invaluable help in identifying and locating irrigators. We are very grateful to him, and to State Conservationist Richard M. Dailey and Howard Ellis of the State College Department of Engineering Extension for their usual generous co-operation.

The map at page 3 was prepared by Charles Nakamura of the Institute of Government.

